NASA TECHNICAL STANDARDS PROGRAM AWARENESS INITIATIVE

Homepage: http://standards.nasa.gov

4/12/01

Darlene Springer
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544-1312

OUTLINE

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TECHNICAL STANDARDS PRODUCTS

TYPES OF DOCUMENTS

- Technical Standards
- Specifications
- Handbooks
- Guidelines
- Regulations
- Codes

KINDS OF TECHNICAL STANDARDS

- Company
- Consortium
- Industry
- Voluntary Consensus (Non-Government)
- National or Government
- International

STANDARDIZATION SYSTEMS

United States

- ✓ Distributed
- • Pragmatic
- • Reactionary
- ✓ Inch-Pound (English)
- • Entrepreneurial and individualistic
- ✓ Maximize role of private sector

- • Tolerated; Implementation questioned
- ✓ International standards often only guides
- ✓ Open and transparent
- • Appeals mechanisms exist
- • Self-certification and warranties

Other Industrialized Nations

- ✓ Centralized
- • Systematic
- • Anticipatory
- ✓ Meter-kilogram (Metric)
- • Tools of industrial policy
- ✓ Standards development responsive to government direction and national policy
- • Acceptance; immediate implementation
- ✓ Direct adoption of international standards
- ✓ Often closed, negotiated standards development
- • Appeals procedures are exception
- • Type approval and third party testing

THE CHANGING WORLD OF TECHNICAL STANDARDS

NASA is engaged in an Agency-wide effort to replace NASA specifications and standards with non-Government standards. This effort, however, has resulted in some questions:

- What's wrong with the way we have been doing things; why change?
- Why does NASA still need to develop standards products?
- What benefits do we expect from developing and maintaining common standards?

Factors Impacting NASA's Need/Use of Technical Standards

✓ Shrinking Resources Budget

- Performance Based Contracting
- Single Process Initiative

✓ Increasing International Cooperation/Competition

- Increased Use of a Restructured Aerospace Industrial Base

✓ PL 104-113 and OMB Circular A-119 on Use of Voluntary Consensus Standards (non-Government)

- Need for NASA-unique Project Interface Control Documents (ICD's)

✓ Important mechanism for collecting & communicating experiences (lessons learned) among Centers

“There is nothing so difficult, so dangerous, nor so doubtful of success than trying to change the way that men work”

Niccolo Machiavelli

(1469-1527)

BACKGROUND

- Formation of NASA and Relationship to Technical Standards
  - Each Center developed or adopted their own standards products based on individual needs.
  - Needs encompass everything from small research laboratory activities to major programs such as Apollo, Space Shuttle and International Space Station.
  - A consolidated and coordinated set of NASA-wide Preferred Technical Standards essentially did not exist.

- Rapidly Changing Domestic & International Climate in the Aerospace Industry
  - Need for common database of standards based on coordinated actions by all Centers as recognized by the NASA Engineering Management Council
  - New NASA-wide thrust needed to identify and consolidate Center-developed standards, voluntary consensus standards (VCS's) (non-Government), and Mil-Specifications/Standards.

GOALS AND AUTHORITY

Goals:

Improve and Maintain NASA's Engineering Capability

Capture and Preserve Engineering Lessons Learned and Best Practices

Facilitate the Insertion of Technology into all NASA Programs/Projects

Ref: NASA Strategic Plan, Provide Aerospace Products and Capabilities (PAPAC)

Authority:

NASA Policy Directive (NPD 8070.6), "Technical Standards", October 10, 1997 NASA Preferred Technical Standards Program Plan, April 15, 1999

NASA NPG 120.5, "NASA Programs and Project Management Processes and Requirements", April 3, 1998

Public Law 104-113, "National Technology Transfer and Advancement Act of 1995"

OMB Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and Conformity Assessment Activities" (Revised February 10, 1998)

Delegation of Authority:

Marshall Space Flight Center Designated as the Agency's Lead Center for the NASA Technical Standards Program

RESULTS AND BENEFITS

- More commonality with industry practice
- Reduced conflict/duplication of effort within NASA
- Sharing and systematic documenting of experience/expertise/lessons learned to preserve them
- Framework for accelerating introduction and acceptance of new technology
- Compliance with PL 104-113, OMB Circular A-119
    - Requires use of non-Government standards in lieu of Government standards except where their use is against the law or impractical
    - Requires Annual reporting to Congress on:
      1) Government Standards being used contractually in lieu of a non-Government Standard
      2) Government Employee Participation in non-Government Standards Developing Organizations

References to Standards in NPG 7120.5A
NASA Program and Project Management Processes and Requirements

Chapter 2. Program Management Process & Functional Requirements

2.3.4.2 Design, Develop, and Sustain

h. Ensure program integration of the following:

(1) Technical standards and guidelines with preference given to voluntary consensus standards (non-Government) where practical.

(2) The International System of Units (metric) measurement system, where practical.

Chapter 3. Project Management Process & Functional Requirements

3.3.4.2 Design, Develop, and Sustain

j. Use technical standards and guidelines with preference given to voluntary consensus (non-Government) standards where practical.

k. Use the International System of Units (metric) measurement system, where practical.

Appendix D

D.2 Center Responsibilities

a. The Lead Center Director is responsible for:

(9) Ensuring compliance to policy/standards.

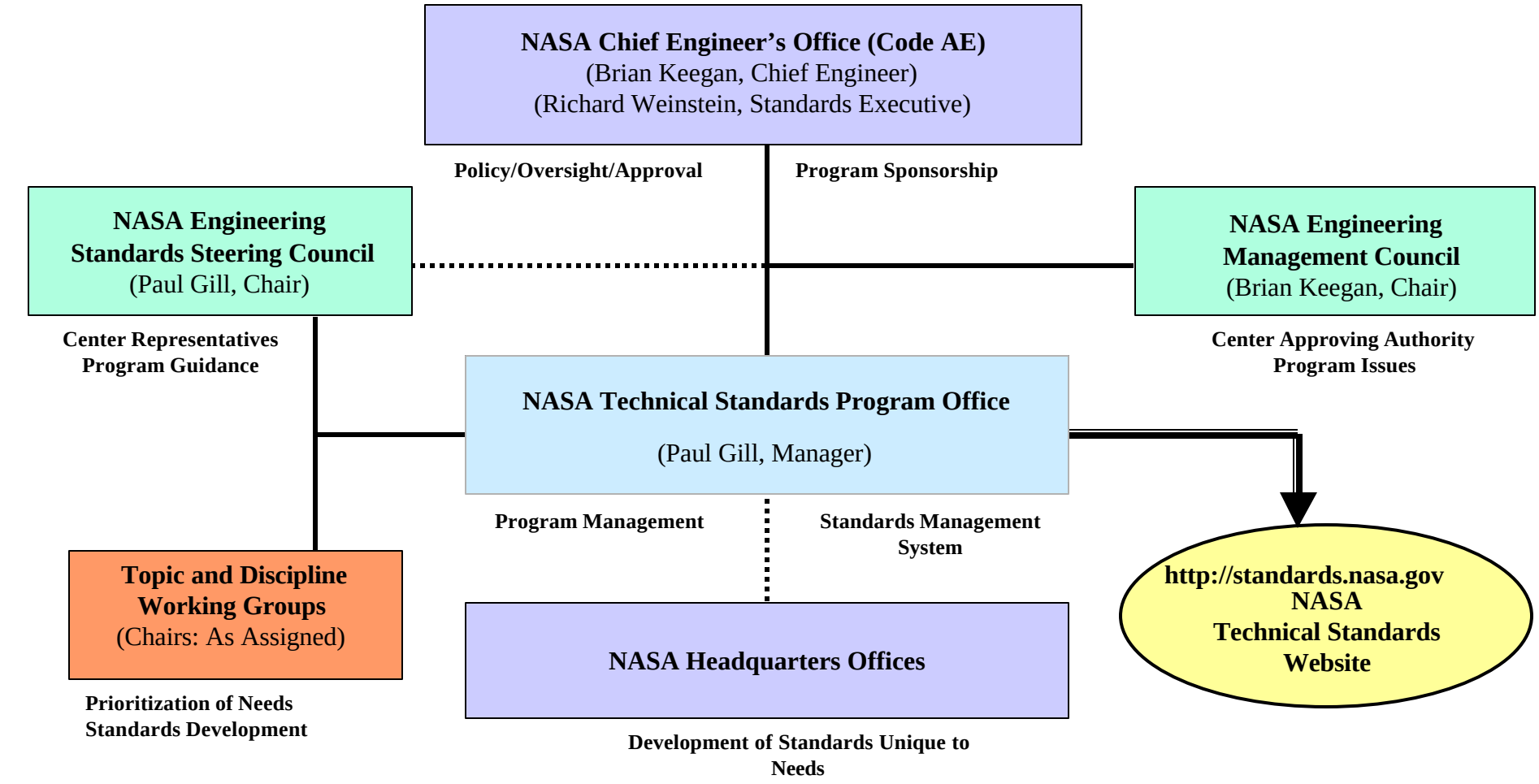
c. The Program Manager is responsible for:

(11) Complying with applicable Federal law, Regulations, Executive orders, and Agency Directives.

d. The Project Manager is responsible for:

(7) Complying with applicable Federal law, Regulations, Executive orders, and Agency Directives.

FUNCTIONAL DIAGRAM FOR THE NASA TECHNICAL STANDARDS PROGRAM



STATUS OF AGENCY-WIDE PREFERRED TECHNICAL STANDARDS (Development and Adoption)

- Engineering
  - 15 NASA standards published, 15 in development
  - 881 standards adopted from 40 Non-Government Voluntary Consensus Standards (VCS) organizations
  - 459 Non-Government Standards Pending Adoption as "NASA Preferred Standards"
  - 91 Center-developed standards identified as candidates for conversion to a NASA standard or VCS
- Safety and Mission Assurance
  - 23 NASA Standards published
- Information Technology
  - 18 NASA Standards published
- Data Communications
  - 22 Consultative Committee for Space Data Systems (CCSDS) standards Published/Adopted
- Facility Construction
  - Linked to SPECSINTACT system with >4000 standards
- NASA personnel involved in the development of over 145 national and international standards developing organizations
- Selected availability on Program Website of full-text non-Government technical standards

KEY PROGRAM INITIATIVES:

- NASA-Unique Standards Development Initiative
- Conversion of Center-Developed Standards to NASA Preferred Technical Standards (NASA or Non-Government) Initiative
- Voluntary Consensus Standards (Non-Government) Adoption and Development Initiative
- Standardization Awareness Initiative
- NASA Integrated Technical Standards Initiative
  - Agencywide Full-Text Technical Standards System
  - Standards Update Notification System (SUNS)
  - Lessons Learned/Best Practices/Application Notes – Standards Integration System

NASA Integrated Technical Standards Initiative

- Agencywide Full-Text Technical Standards System

  Provide Agency with Access to NASA, DoD, and Non-Government Full-text Technical Standards Products

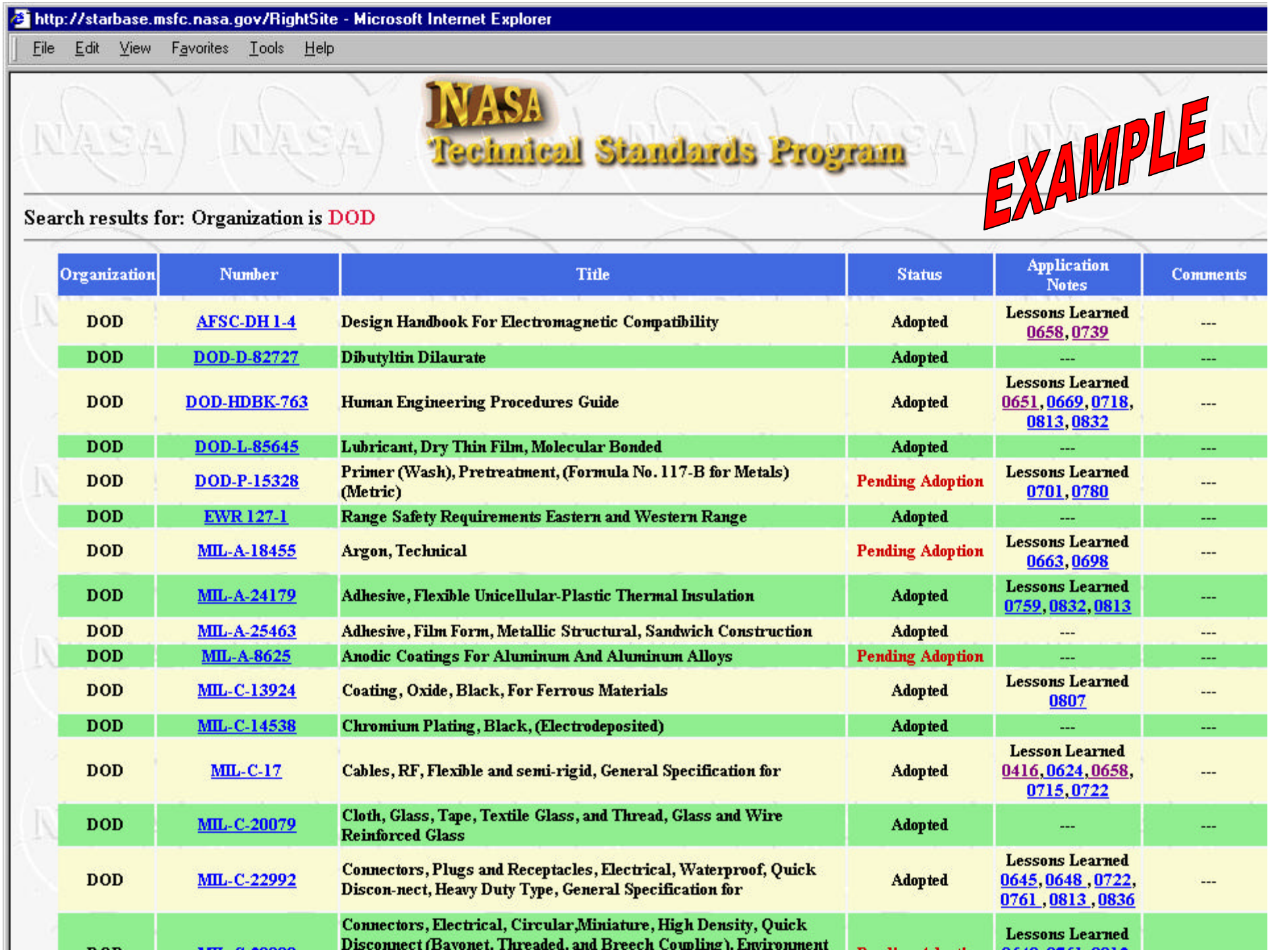
- Standards Update Notification System (SUNS)

  Develop and implement a System to Alert Agency's Programs/Projects, Technical Staff, and On-Site Contractors of Changes to Standards Products being used.

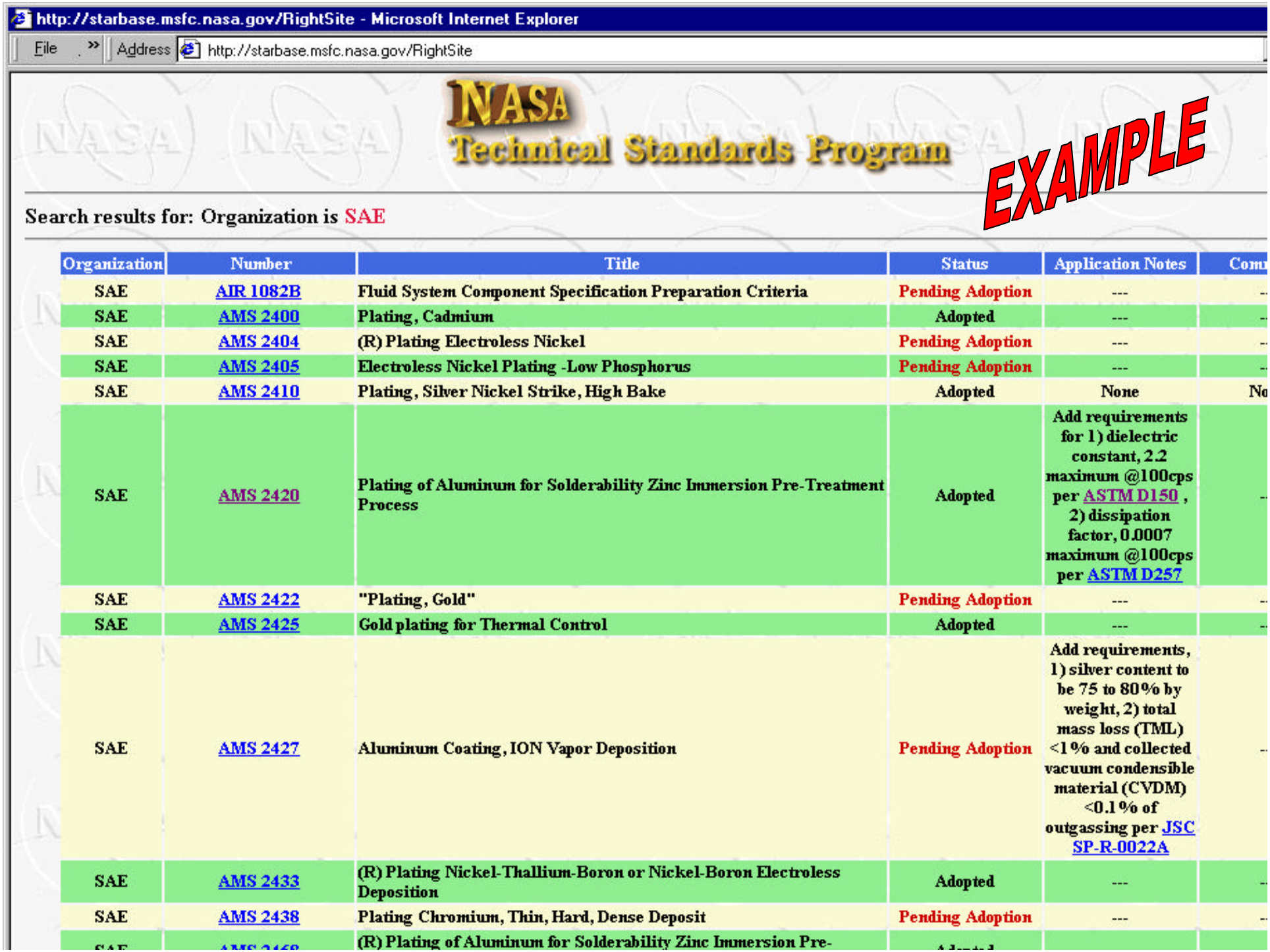
- Lessons Learned/Best Practices/Application Notes - Standards Integration System

  Where appropriate, link Lessons Learned to NASA Preferred Technical Standards.

  Add Application Notes to Preferred Technical Standards Listing to provide Experiences with Technical Standards Products Developed by Other Organizations.



Organization	Number	Title	Status	Application Notes	Comments
DOD	AFSC-DH 1-4	Design Handbook For Electromagnetic Compatibility	Adopted	Lessons Learned 0658, 0739	---
DOD	DOD-D-82727	Dibutyltin Dilaurate	Adopted	---	---
DOD	DOD-HDBK-763	Human Engineering Procedures Guide	Adopted	Lessons Learned 0651, 0669, 0718, 0813, 0832	---
DOD	DOD-L-85645	Lubricant, Dry Thin Film, Molecular Bonded	Adopted	---	---
DOD	DOD-P-15328	Primer (Wash), Pretreatment, (Formula No. 117-B for Metals) (Metric)	Pending Adoption	Lessons Learned 0701, 0780	---
DOD	EWR 127-1	Range Safety Requirements Eastern and Western Range	Adopted	---	---
DOD	MIL-A-18455	Argon, Technical	Pending Adoption	Lessons Learned 0663, 0698	---
DOD	MIL-A-24179	Adhesive, Flexible Unicellular-Plastic Thermal Insulation	Adopted	Lessons Learned 0759, 0832, 0813	---
DOD	MIL-A-25463	Adhesive, Film Form, Metallic Structural, Sandwich Construction	Adopted	---	---
DOD	MIL-A-8625	Anodic Coatings For Aluminum And Aluminum Alloys	Pending Adoption	---	---
DOD	MIL-C-13924	Coating, Oxide, Black, For Ferrous Materials	Adopted	Lessons Learned 0807	---
DOD	MIL-C-14538	Chromium Plating, Black, (Electrodeposited)	Adopted	---	---
DOD	MIL-C-17	Cables, RF, Flexible and semi-rigid, General Specification for	Adopted	Lesson Learned 0416, 0624, 0658, 0715, 0722	---
DOD	MIL-C-20079	Cloth, Glass, Tape, Textile Glass, and Thread, Glass and Wire Reinforced Glass	Adopted	---	---
DOD	MIL-C-22992	Connectors, Plugs and Receptacles, Electrical, Waterproof, Quick Discon-nect, Heavy Duty Type, General Specification for	Adopted	Lessons Learned 0645, 0648 , 0722, 0761 , 0813 , 0836	---
		Connectors, Electrical, Circular,Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment		Lessons Learned	



Search results for: Organization is SAE

Organization	Number	Title	Status	Application Notes	Comm
SAE	AIR 1082B	Fluid System Component Specification Preparation Criteria	Pending Adoption	---	--
SAE	AMS 2400	Plating, Cadmium	Adopted	---	--
SAE	AMS 2404	(R) Plating Electroless Nickel	Pending Adoption	---	--
SAE	AMS 2405	Electroless Nickel Plating -Low Phosphorus	Pending Adoption	---	--
SAE	AMS 2410	Plating, Silver Nickel Strike, High Bake	Adopted	None	No
SAE	AMS 2420	Plating of Aluminum for Solderability Zinc Immersion Pre-Treatment Process	Adopted	Add requirements for 1) dielectric constant, 2.2 maximum @100cps per ASTM D150 , 2) dissipation factor, 0.0007 maximum @100cps per ASTM D257	--
SAE	AMS 2422	"Plating, Gold"	Pending Adoption	---	--
SAE	AMS 2425	Gold plating for Thermal Control	Adopted	---	--
SAE	AMS 2427	Aluminum Coating, ION Vapor Deposition	Pending Adoption	Add requirements, 1) silver content to be 75 to 80% by weight, 2) total mass loss (TML) <1% and collected vacuum condensible material (CVDM) <0.1% of outgassing per JSC SP-R-0022A	--
SAE	AMS 2433	(R) Plating Nickel-Thallium-Boron or Nickel-Boron Electroless Deposition	Adopted	---	--
SAE	AMS 2438	Plating Chromium, Thin, Hard, Dense Deposit	Pending Adoption	---	--
SAE	AMS 2468	(R) Plating of Aluminum for Solderability Zinc Immersion Pre-	Adopted		

POTENTIAL AREAS FOR PARTICIPATION AND PROVIDING ASSISTANCE TO THE NASA TECHNICAL STANDARDS PROGRAM

- Increase your use of Voluntary Consensus non-Government Standards (VCS) Products.
  - Recommend VCS products for adoption as NASA Preferred Technical Standards at NASA Technical Standards Program Website.
  - Identify Government standards products, including Center-developed, for replacement with VCSs.
  - Participate in standards development efforts of VCS Development Bodies.
- Development of new NASA Technical Standards Products
  - Where VCSs do not exist or are not practical for use (such as safety, NASA-unique,etc.), propose new standards products for the Standards Program to develop or adopt.
  - To capture “lessons learned” and “best practices”
  - For use on “in-house” activities (such as ICD’s)
- UPN Code is 297-10-13 should be used for charging time relative to any NASA or Standards Developing Organization technical standards review or development activity.
- **COMMUNICATE THE EXISTANCE OF THE NASA TECHNICAL STANDARDS PROGRAM AND WEBSITE (http://standards.nasa.gov) TO YOUR COLLEAGUES**

NASA TECHNICAL STANDARDS HOMEPAGE

http://standards.nasa.gov

Contents Summary

- Search for NASA Preferred Standards Products
- Technical Standards Under Development
- Technical Standards Related Databases (NASA Centers)
- Technical Standards Proposal Submittals
- Review NASA Standards Proposals and Documents (NASA Access Only)
- NASA Participation in Technical Standards Developing Organizations
- Links to Technical Standards Organizations
- Lessons Learned/Best Practices Databases – Technical Standards
- Metals and Materials Databases (NASA Access Only)
- Overview
- What's New
- Supporting Documents


NASA TECHNICAL STANDARDS PROGRAM - Microsoft Internet Explorer
File Edit View Favorites Tools Help
MENU
Expand all | Collapse all
Search For NASA Preferred Technical Standards
Technical Standards Under Development
Technical Standards Related Databases (NASA Centers)
Technical Standards Proposal Submittals
Review NASA Standards Proposals & Documents (NASA Access Only)
NASA Participation In Technical Standards Developing Organizations
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Metals And Materials Databases (NASA Access Only)
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Welcome to the NASA Technical Standards Program website. This website is sponsored by the NASA Chief Engineer as a common access point for technical standards developed by NASA and others adopted for use on NASA programs. Adopted standards are those Types of Standards Products developed by other Government and non-Government national and international standards developing organizations. The primary emphasis is placed on the use of "preferred" technical standards that have been approved by NASA Chief Engineer as recommended by the NASA Engineering Standards Steering Council, based on a consensus of the NASA Centers.
NASA-developed and pending development Technical Standards listed on the Web-site are available on-line in full-text without charge to all users. A listing of NASA adopted and pending adoption Voluntary Consensus Standards is also given. Where noted these non-Government voluntary consensus developed technical standards are available in full-text without charge to users in the "nasa.gov" domain. For all other users, the technical standards listed may be purchased from the respective standards developing organization. DOD and CCSDS technical standards products are available without charge to all users.

MSFC TECHNICAL STANDARDS DOCUMENT SERVICE

(GSA Provider:Lyme Computer Services/USA Information Systems)

http://starbase.msfc.nasa.gov/USAinfo/main.htm

Contents Summary

- Login page for MSFC access to USA Information Systems' Logistics and Engineering Resource Center
- Full Text NASA Developed Preferred Technical Standards
- Full Access to Mil/Fed Specs/Standards/Regulations
- Access to non-Government Voluntary Consensus Standards Organizations' Standards Products
- Access to Vendor/Manufacturer Catalogs (WIZNET)
- Access to Electrical Component Database (ASPECT)

BACKUP

TYPES OF TECHNICAL STANDARDS PRODUCTS

Technical Standards: Documents that establishes uniform engineering and technical requirements for processes, procedures, practices, and methods that have been adopted as standard, including requirements for selection, application, and design criteria of an item.

Specifications: Documents prepared specifically to support acquisition which clearly and accurately describes essential technical requirements for purchased items. Procedures necessary to determine that the requirements covered by the specification have been met are also included.

Handbooks: Authoritative engineering, technical, or design information and data relating to processes, procedures, recommended practices, and methods. Handbooks are the result of the consensus process and may evolve into standards through application and industry acceptance.

Guidelines: Technical information in support of Standards, Specifications, and Handbooks. Guidelines provide instructions and data for the application of standards and recommended practices, procedures, and methods. Recommended Practices are in this category, as well as preliminary standards.

Regulations: Standards which are accepted by and enforced by a government unit.

Codes: A group of standards dealing with one subject such as fire, electrical, building, plumbing, boilers, etc.

LEVELS OF STANDARDIZATION

- Company Standard: For internal use within own organization.
- Consortium Standard: Consensus among a small group of organizations, usually like-minded companies, formed to undertake an activity that is beyond the resources of any one member.
- Industry Standard: Group having a common industrial classification.
- Voluntary Consensus Standard (Non-Government): Developed by representatives of all sectors that have an interest in the use of the standard. This is considered the most technically sound and most credible of documents due to the broad inputs and consensus.
- National or Government Standard: Most countries have national standards. In the U.S. there are no "National Standards". U.S. Government Standards fall into two areas - Procurement Documents and Regulatory Documents.
- International Standard: Created by representatives from two or more countries, and, in turn, are used in more than one country (ISO, IEC, CEN, CENELEC, DIN, BSI, etc.).

SOME HIGH POINTS IN THE ORIGIN OF STANDARDS

- Noah's Ark Specification (300 cubits long by 50 cubits wide by 30 cubits high)
- Egyptian's (2500 BC) Standard Unit of measure - the Cylindrical, Royal Cubic
- Mesopotamia's (2000 BC) Code of Hammurabi - one part covered Specification for the Manufacture of Bricks
- Edward the Confessor's (1050 AD) Decree on the unit of measure (nose to thumb) that became the yard
- Many early standards were set unilaterally by the powers that be, ie. royal prerogative
- United States Pharmacopeia Convention (1829) - first standard-setting organization in the U.S. - set uniform standards for drugs
- One of the first DoD uses of a Non-government standard occurred (1917) when the decision was made to use SAE's Standard for Interchangeable Aeronautic Spark Plugs
- Traffic Light Colors and Meaning Standardized (1927) through collaboration of National Safety Council, National Bureau of Standards, American Association of State Highway Officials
- British-American Equipment Experiences in WWII resulted in adoption of International Screwhead Standard (1948).

HOW MIL SPECS LIVE FOREVER

The US Standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number. Why was that gauge used?

Because that's the way they built them in England, and the US railroads were built by English expatriates.

Why did the English people build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used.

Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons use that odd wheel spacing? Well, if they tried to use any other spacing the wagons would break on some of the old, long distance roads, because that was the spacing of the old wheel ruts.

So, who built these old rutted roads? The first long distance roads in Europe were built by Imperial Rome for the benefit of their legions. The roads have been used ever since. And the ruts? The initial ruts, which everyone else had to match for fear of destroying their wagons, were first made by roman war chariots. Since the chariots were made for or by Imperial Rome, they were all alike in the matter of wheel spacing.

Thus, we have the answer to the original questions. The United States standard railroad gauge of 4 feet, 8.5 inches derives from the original specification (Military Spec) for an Imperial Roman army war chariot. MIL Specs and Bureaucracies live forever.

So, the next time you are handed a specification and wonder what horse's ass came up with it, you may be exactly right. Because the Imperial Roman chariots were made to be just wide enough to accommodate the back-ends of two war horses.

Source: Professor Tom O'Hare, University of Texas at Austin

NASA Engineering Standards Steering Council (ESSC)

ESSC CHAIR	Paul Gill (MSFC)	
CENTER REPRESENTATIVES	PRIMARY	ALTERNATE
ARC	Phil Luna	Laura Doty
DFRC	Mike Thomson	
GRC	Frank Greco	Dan Gauntner
GSFC	Madeline Butler	Steve Brodeur
JPL	Chuck Shinbrot	
JSC	Nick Lance	
KSC	Larry Schultz	
LaRC	Richard Foss	
MSFC	Ed Kiessling	
SSC	Bill St. Cyr	Rhonda Foley
HQ REPRESENTATIVES	R.Weinstein, Code AE R. Benedict, Code AO J. Kelley, Code MT W. Harkins and W. Frazier, Code QS	

EMPLOYEE PARTICIPATION GUIDELINES IN NON-GOVERNMENT VOLUNTARY CONSENSUS STANDARDS DEVELOPING BODIES

- Policy for Participation
  - Consult
  - Participate
  - Support
- Purposes of NASA Participation
  - Eliminate necessity for NASA Developed Standards
  - Further National Goals and Objectives
- Types of Support That May be Provided
  - Direct Financial Support
  - Administrative Support
  - Technical Support
  - Joint Planning
  - Participation
- Authorization for Participation
  - As specifically Authorized Agency Representatives
  - Compliance With Applicable Laws and Regulations
  - Subject to Outside Activities Participation Rules
  - Must Do at Federal Expense if Representing the Agency
  - Involve Agency Ethics Officer as Appropriate

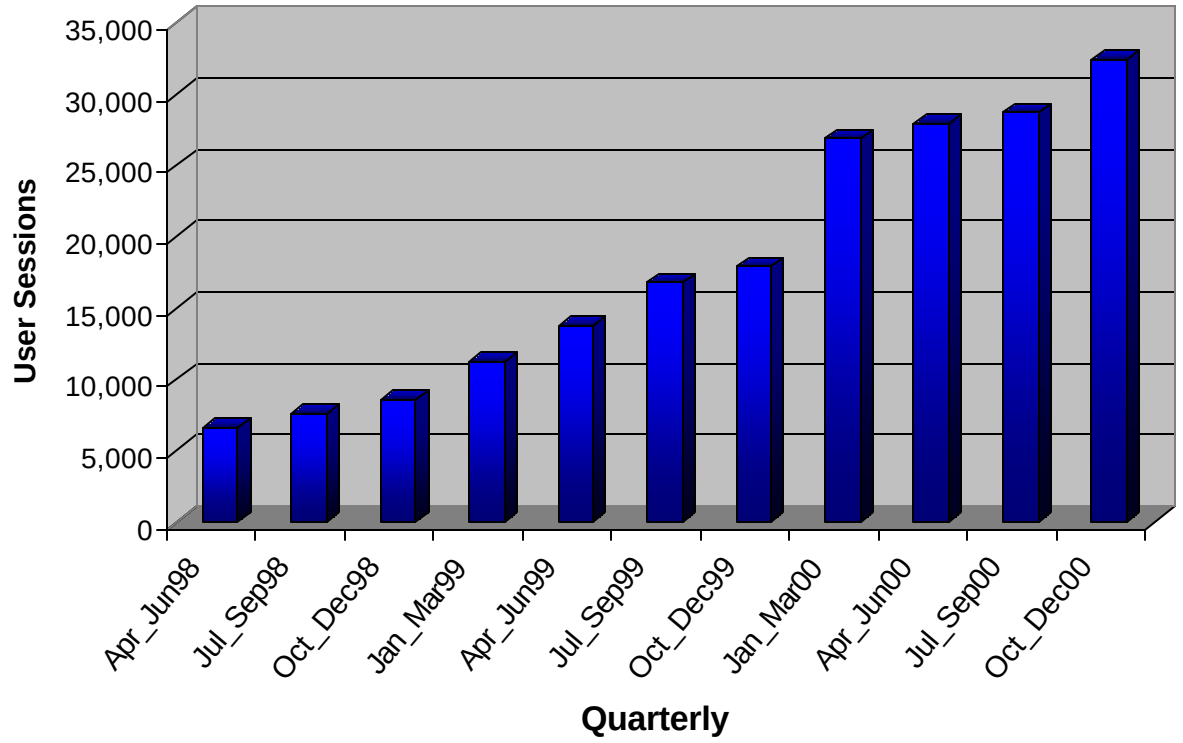
EMPLOYEE PARTICIPATION GUIDELINES IN NON-GOVERNMENT VOLUNTARY CONSENSUS STANDARDS DEVELOPING BODIES (CONTINUED)

- Agency Participation In and Endorsement of Decisions
  - Participation Does Not Necessarily Imply Agency Agreement With, or Endorsement Of, Decisions Reached
  - May Serve as Chairpersons or Other Capacity
  - May Vote at Each Stage of Development Process Unless Prohibited by Law or By NASA
- Limitations of Participation
  - Refrain from Involvement in the Internal Management of Voluntary Consensus Standards Developing Bodies
  - Must Not Dominate Such Bodies
  - Must Avoid the Practice or the Appearance of Undue Influence
- Responsibilities
  - Express Views That are Consistent With Established NASA Views
  - Ensure Participation Is Consistent With Agency's Mission, Authorities, Priorities, and Budget Resources
  - Provide Input to Agency-wide Directory Regarding Employee's Participation and Standards Body
- Federal Contractors
  - Do Not Fall Within the Definition of an Agency
  - If Participated On Behalf of Agency (As representative or liaison), Contractor Must comply With Federal "Participation" Policies of OMB Circular A-119

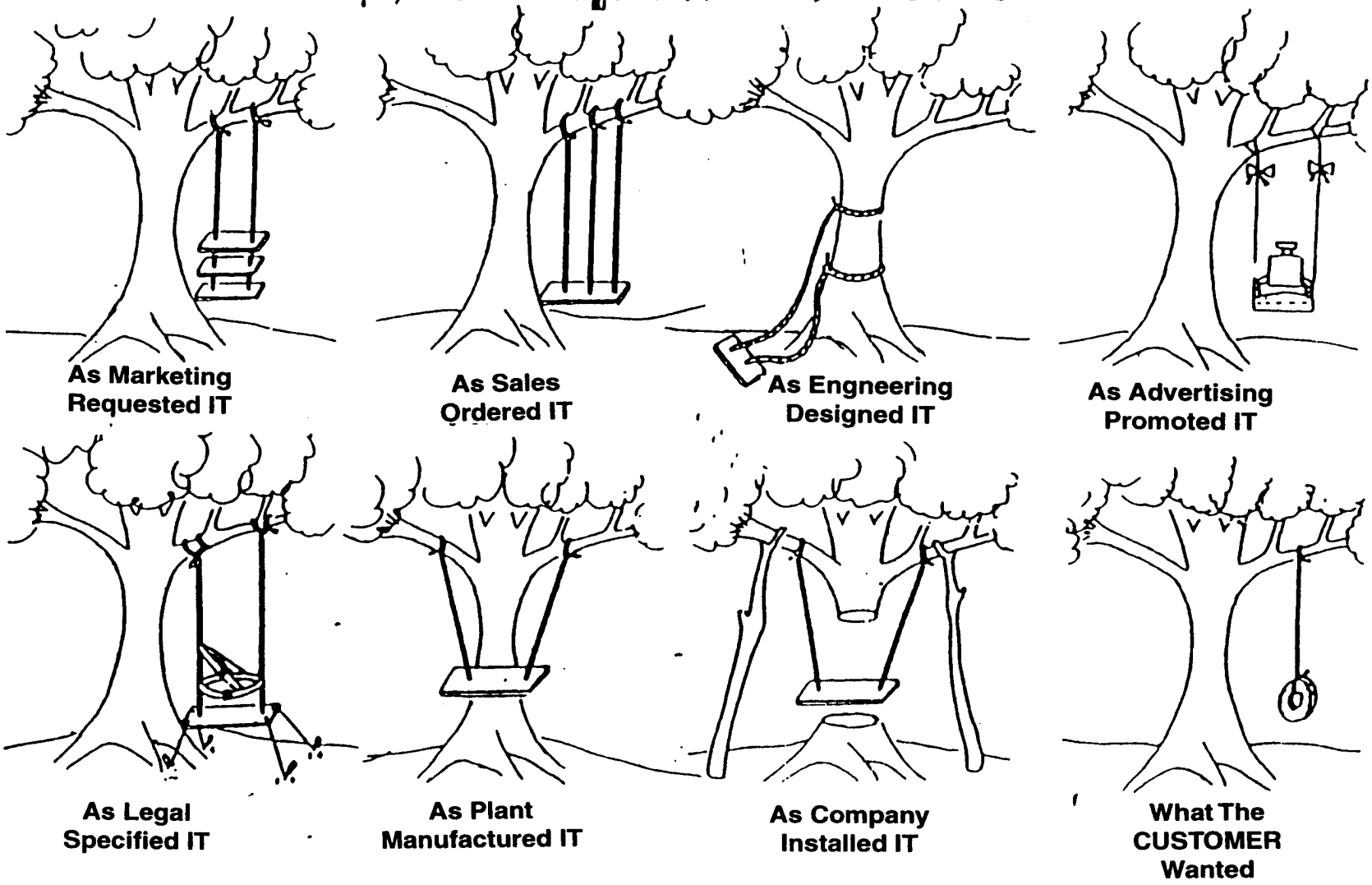
NASA Preferred Technical Standards By Categories

Documentation and Configuration Management, Program Management Configuration & Documentation Mgmt, Packaging, shipping & Handling, Reproduction & Document Archiving
Systems Engineering and Integration, Aerospace Environments, Celestial Mechanics Orbital & Celestial mechanics, Aerospace Environments, System Engineering and Integration
Computer Systems, Software, Information Systems Computer Design (Flight & Ground), Software Design (Flight & Ground), Computer & Software Security, Information Systems(ADP) & Network Communications Design
Human Factors and Health Ergonomics, Health Science
Electrical Systems, Electronics, Avionics/Control systems, Optics Electrical / Electronic Design including Printed Circuit Boards & Electrical Ground & Airborne Support Equipment Electromagnetics and Electrical Discharge Control Guidance & Control, & Optics
Structures/Mechanical systems, Fluid, Thermal, Propulsion, Aerodynamics Structural Design including Stress Corrosion control, Mechanical Design Including Mechanical & Propulsion Ground and Airborne Support Equipment, Propulsion Design, Thermal Design, Flight & Fluid Dynamics
Materials and Processes, Parts Materials &Materials testing including Fluids & Propellants, Material Processes, manufacturing, Parts (Mechanical, Electrical, Optical)
System Test, Analysis, Modeling, Evaluation System and Subsystem testing including Environmental testing, Test Evaluation, Analysis and Modeling
Safety, Quality, Reliability, Maintainability Safety (Flight, ground, Personnel and Equipment), Quality (Hardware and Software), Reliability (Hardware and Software) Maintainability (Hardware and Software)
Operations, Command, Control, Telemetry/Data Systems, Communications Flight and Ground Operations, Mission Command & Control, Telemetry and Data Systems Design, RF Communicatins Design
Specifications and Standards for use on Construction Projects (SPECSINTACT) Facilities Design, Roads and Grounds Support (Local transportation, fire control, Telephones, Health Care, Etc.)

NASA Technical Standards Program Web-site Usage

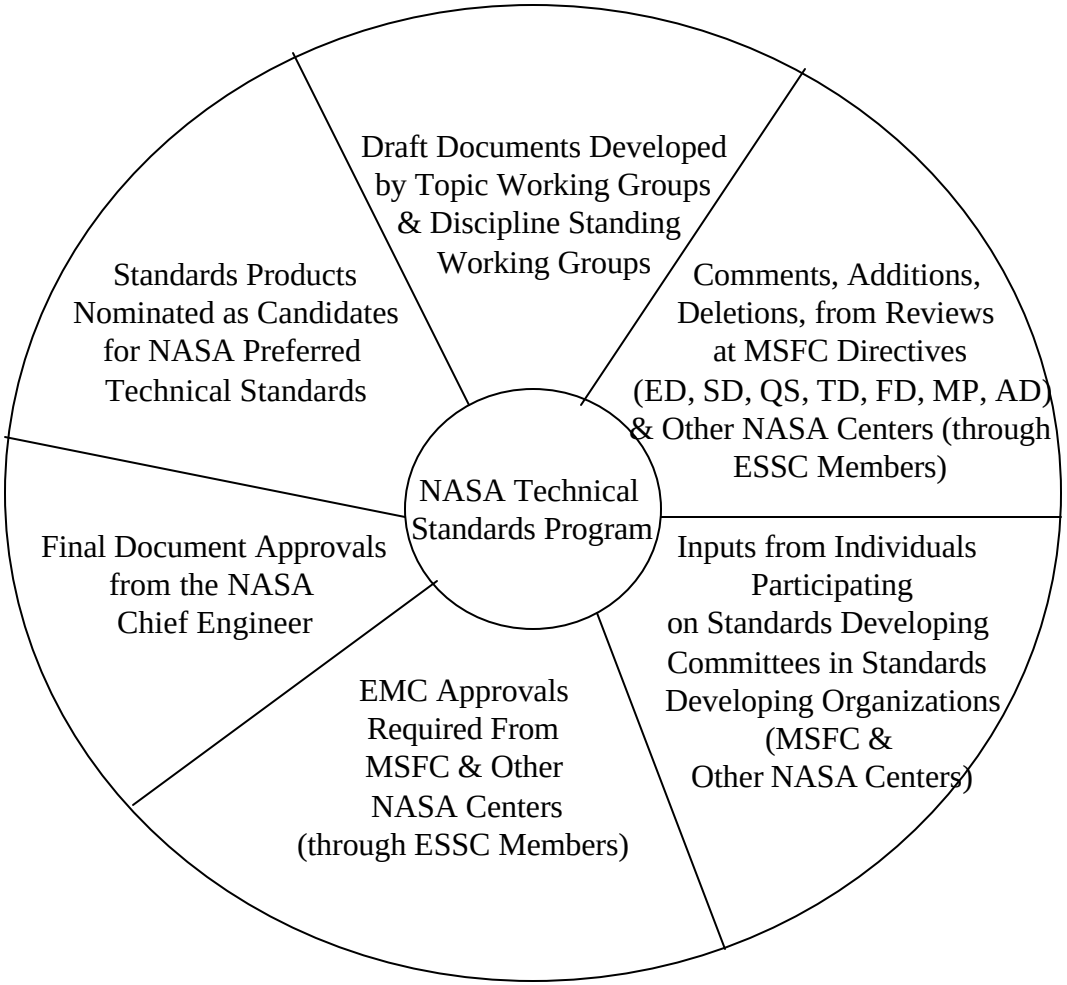


THE PRODUCT



LIGHTER SIDE OF "STANDARDS"

Inputs Required from Other Disciplines or Sources

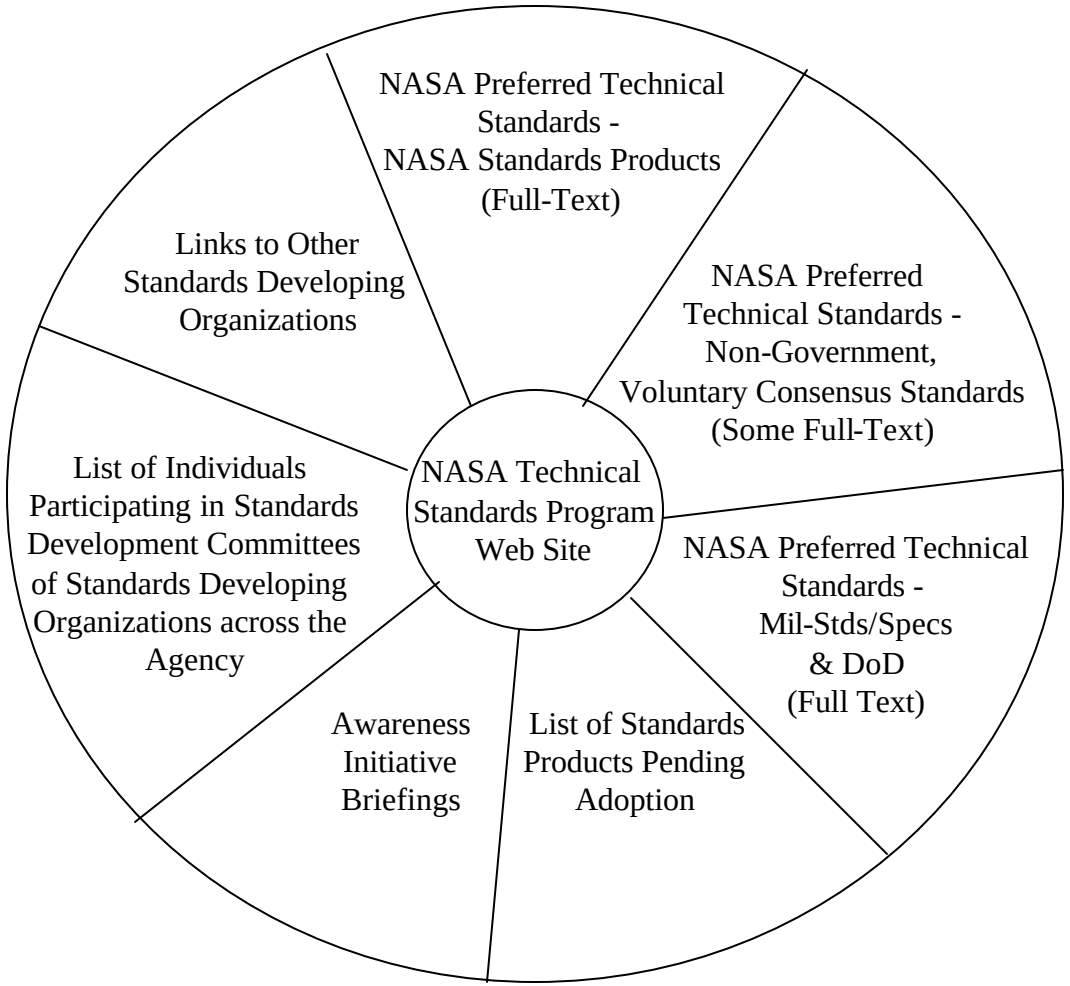


Since the NASA Technical Standards Program is an Agency-wide Program, inputs are received not only from MSFC but from all NASA Centers. Reviews and comments from standards in development or those standards pending adoption are received, as well as, information on individuals participating on standards developing organizations, from across the Agency.

Working Groups develop draft documents which are provided to the Program Office for Agency review. These documents, once developed and revised, must obtain Engineering Management Council representative approvals from each Center to ensure consensus as a NASA standards product developed for use Agency-wide. Once consensus is reached, the final product is sent to the NASA Chief Engineer for his approval.

Individuals are encouraged to access the NASA Technical Standards Program Web Site and nominate those standards products which they use on a regular basis, but are not listed on the web site. These documents then go through a system of Agency reviews and recommendations before being approved as a NASA Preferred Technical Standard.

Outputs from the NASA Technical Standards Program



The NASA Technical Standards Program Web Site provides outputs to other disciplines and groups in the form of NASA Preferred Technical Standards (NASA standards products, non-Government Voluntary Consensus standards, & Mil Stds/DoD). Also provided is a list of those standards products pending adoption, a list of individuals participating in standards developing organizations, and links to other Standards Developing Organizations.

The Program Office also provides Awareness Initiative Briefings to Directorates at MSFC, other Centers, Conferences and Workshops outside of NASA, CSSI Course and other occasions as the opportunity arises.

Our Customers are those technical people who use Technical standards in their work.

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